

DETECTING AND COMPENSATING DEFECTIVE PIXELS IN IMAGE SENSOR ON REAL TIME BASIS

ABSTRACT OF THE DISCLOSURE

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An apparatus for detecting and compensating defective pixels in a real time by using a two-dimension space filter and characteristics of image data simplifies test processes for an image sensor and enhances yield of the image sensor chip. The apparatus includes: a defect pixel detection block for detecting and determining a defective pixel based on a check condition, the condition representing that image data of the defective pixel has a value larger than a first coefficient of the maximum image data of adjacent normal pixels or a value smaller than a second coefficient of the minimum image data of that; and a defect pixel compensation block for compensating the image data of the defective pixel and outputting compensated image data, in response to the image data of a check target pixel, the maximum image data of the adjacent normal pixels, the minimum image data of the adjacent normal pixels, a defective pixel determination signal representing that the target pixel is defective, and a minimum or maximum range violation signals representing that the image data of the defective pixel violates the maximum or minimum ranges in the check condition, which are provided thereto from the defective pixel detection block.

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